DEPARTMENT OF THE ARMY TECHNICAL MANUAL

INSTALLATION OF RADIO SET AN/VRC-47 INSTALLATION UNIT IN TRUCK, UTILITY, ¼-TON, 4 X 4, M151 OR M151A1

Headquarters, Department of the Army, Washington, D.C.
15 February 1967

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CHAPTER 1
INTRODUCTION

1–1. Scope

This manual provides instructions for installing the installation unit (FSN 5820–892–0993) that permits basic unit (FSN 5820–892–0864) (Radio Set AN/VRC–47) to be mounted in Truck, Utility, ¼-Ton, 4 × 4, M151 or M151A1.

1–2. Index of Publications

Refer to the latest issue of DA Pam 310–4 to determine whether there are new editions, changes, or additional publications pertaining to this equipment. DA Pam 310–4 is an index of current technical manuals, technical bulletins, supply manuals (types 7, 8, and 9), supply bulletins, lubrication orders, and modification work orders available through publications supply channels. The index lists the individual parts (–10, –20, –35P etc.) and the latest changes to and revisions of each equipment publication.

1–3. Forms and Records

a. Reports of Maintenance and Unsatisfactory Equipment. Use equipment forms and records in accordance with instructions in TM 38–750.

b. Report of Damaged or Improper Shipment. Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700–58 (Army), NAVSANDA Publication 378 (Navy), and AFR 71–4 (Air Force).

c. Reporting of Equipment Publication Improvements. DA Form 2028 (Recommended Changes to DA Publications) will be used for reporting discrepancies and recommendations for improving this equipment publication. The form will be completed by the individual using the manual and forwarded direct to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL–MR–NMP–AD, Fort Monmouth, N.J. 07703.

CHAPTER 2
INSTALLATION

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

2–1. Unpacking

Move the packing boxes close to the location where the installation is to take place, and unpack the parts of the installation unit. Be careful not to lose any of the parts.

2–2. Checking Unpacked Equipment

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on DD Form 6 (para 1–3).

b. See that the equipment is complete as listed on the packing slip. If a packing slip is not available, the completeness of the installation unit can be determined by comparing the parts received with the items listed on installation drawings (fig. 2–2, 2–3, and 2–4). Report all discrepancies in accordance with TM 38–750. Shortage of a minor assembly or part that does not affect proper installation or functioning of the equipment should not prevent the equipment from being installed.

c. When vehicles with radio sets are to be turned in or transferred, communication equipment will be removed and reinstalled in new replacement vehicles. Additional items which are required to complete installation should be requisitioned as individual items. To determine the federal stock number of authorized items in the installation unit, refer to SB 11–131.

Section II. EQUIPMENT INSTALLATION

2–3. Tools Required for Installation

The tools required for installation of Radio Set AN/VRC–47 installation unit are a part of Tool Kits, Radio and Radar Repairman TK–87/U and TM–88/U. The following additional items are needed:

a. One $\frac{3}{8}$-inch electric drill.

b. One set of $\frac{1}{16}$-inch to $\frac{3}{8}$-inch drill bits.

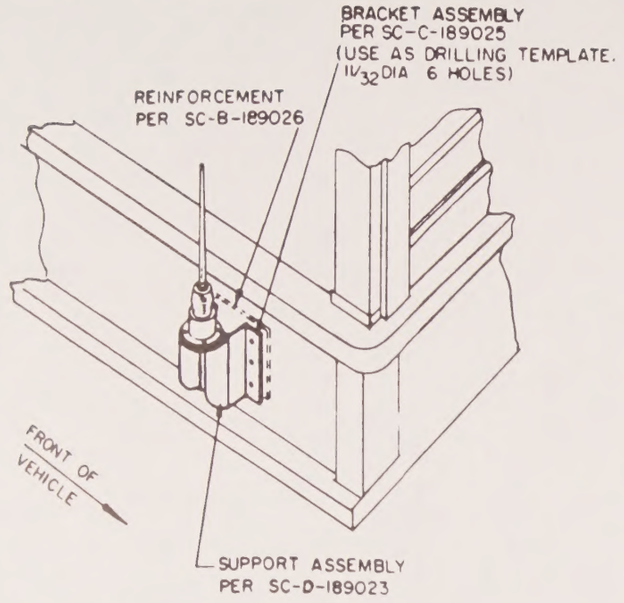
2–4. Installation Instructions

a. To accomplish the installation, follow the instructions shown on figures 2–1 through 2–4.

b. The following additional information is provided:

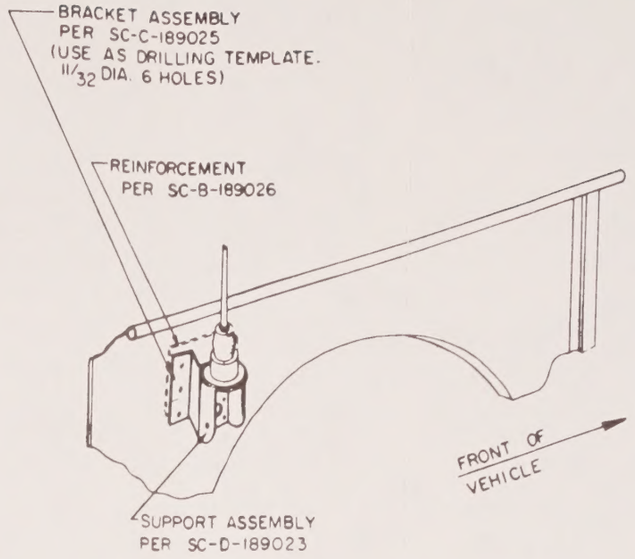
(1) To drill the correct size holes for the sheet metal screws which hold the plastic cable clamps, select a drill bit that is slightly smaller in diameter than the screw.

(2) When the installation is completed, check the tightness of all bolts and screws.



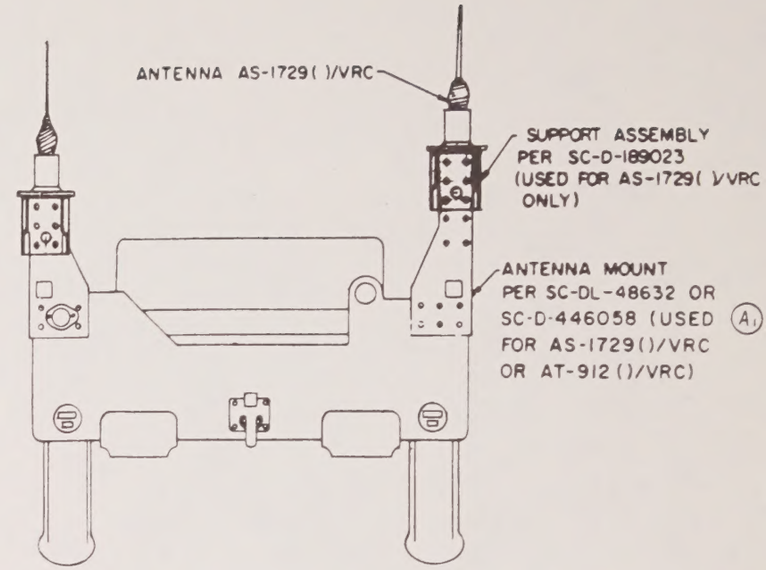
DISCARD BRACKET SC-D-425908

2 1/2 TON TRUCK M211 & M135



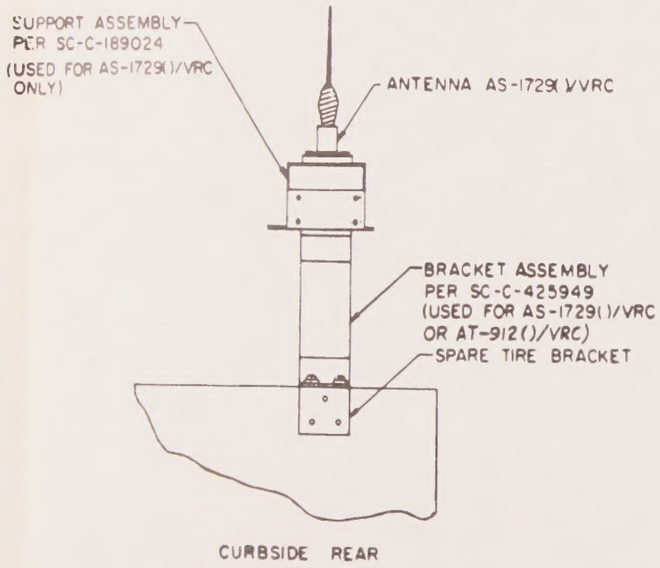
DISCARD BRACKET SC-D-425908

3/4 TON TRUCK M37

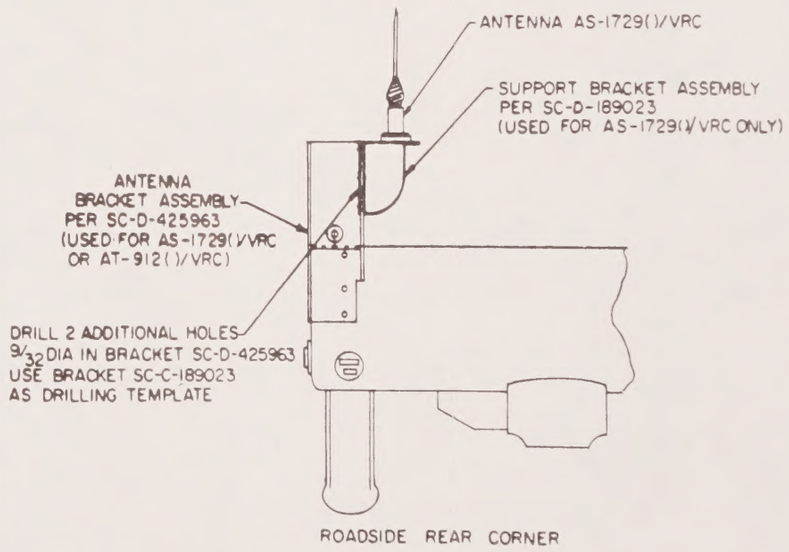


ANTENNA ON ROAD SIDE REAR CORNER MAY BE LOCATED IN THE HIGH OR LOW POSITION.

1/4 TON TRUCK M151

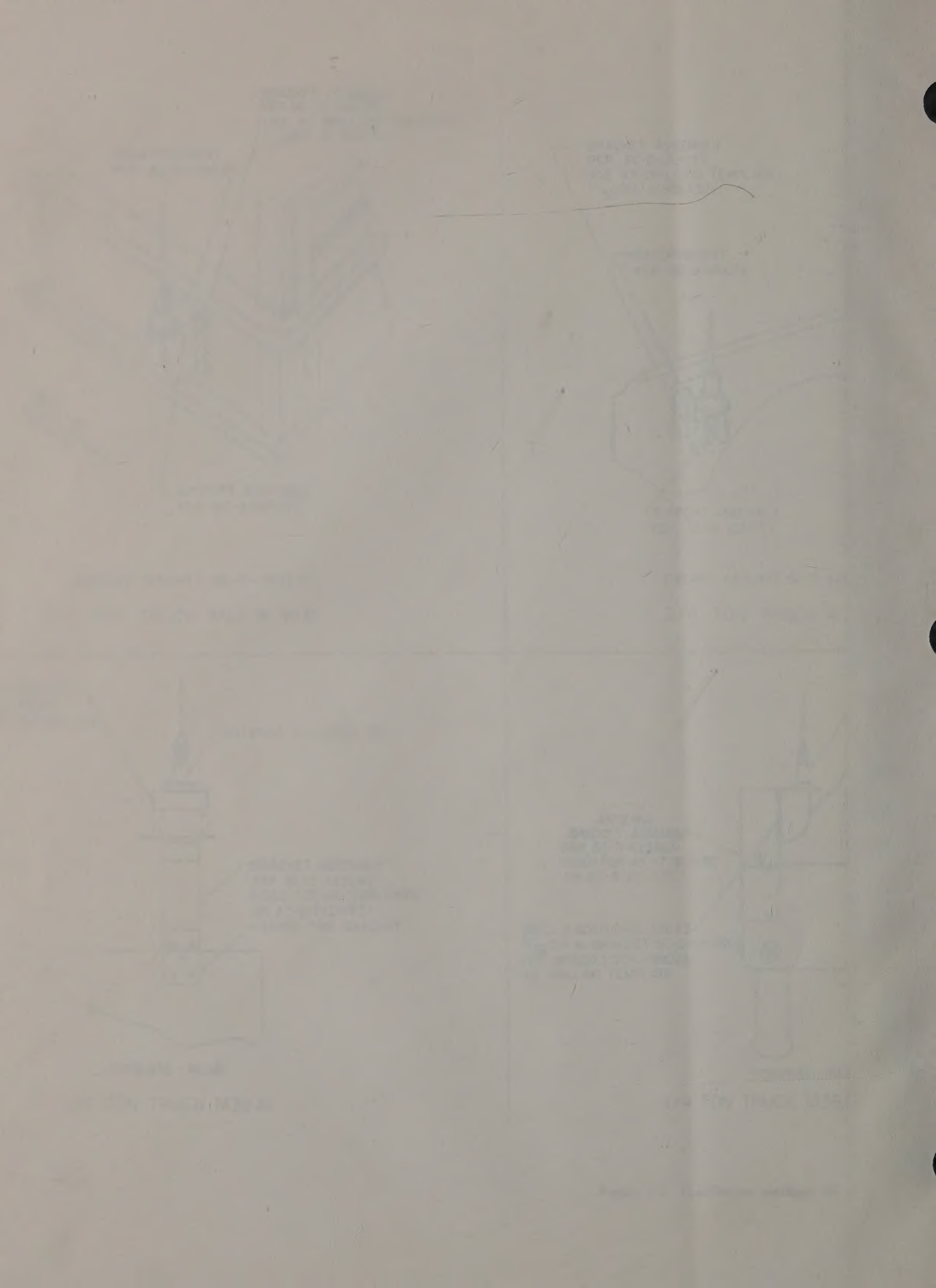


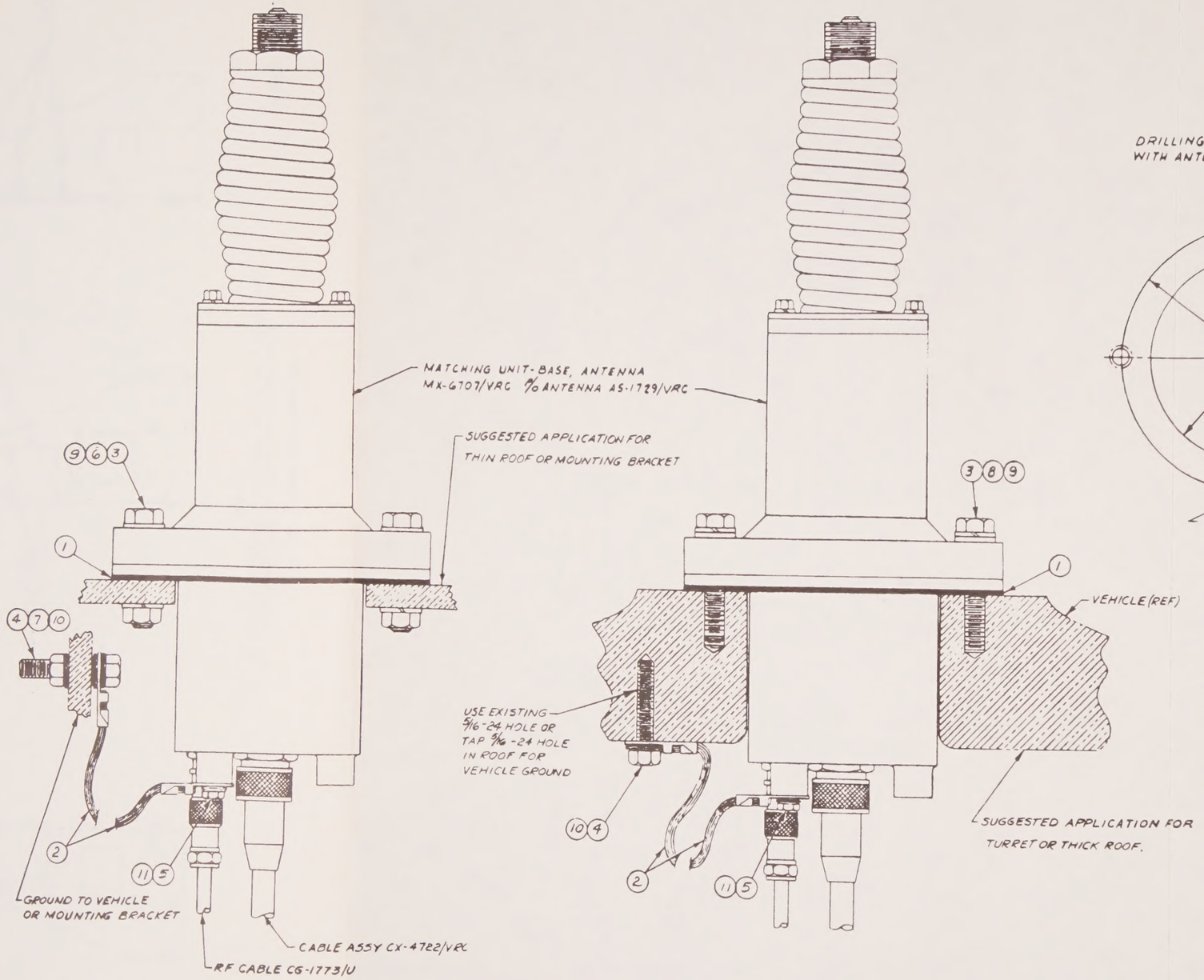
1/4 TON TRUCK M38A1



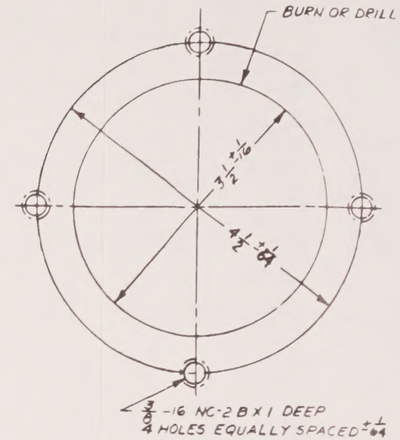
1/4 TON TRUCK M38A1

Figure 2-1. Installation methods for Antenna AS-1729/VRC.





DRILLING DETAIL FOR VEHICLES EQUIPPED WITH ANTENNA OPENING LESS THAN $3\frac{1}{2}$ DIA.

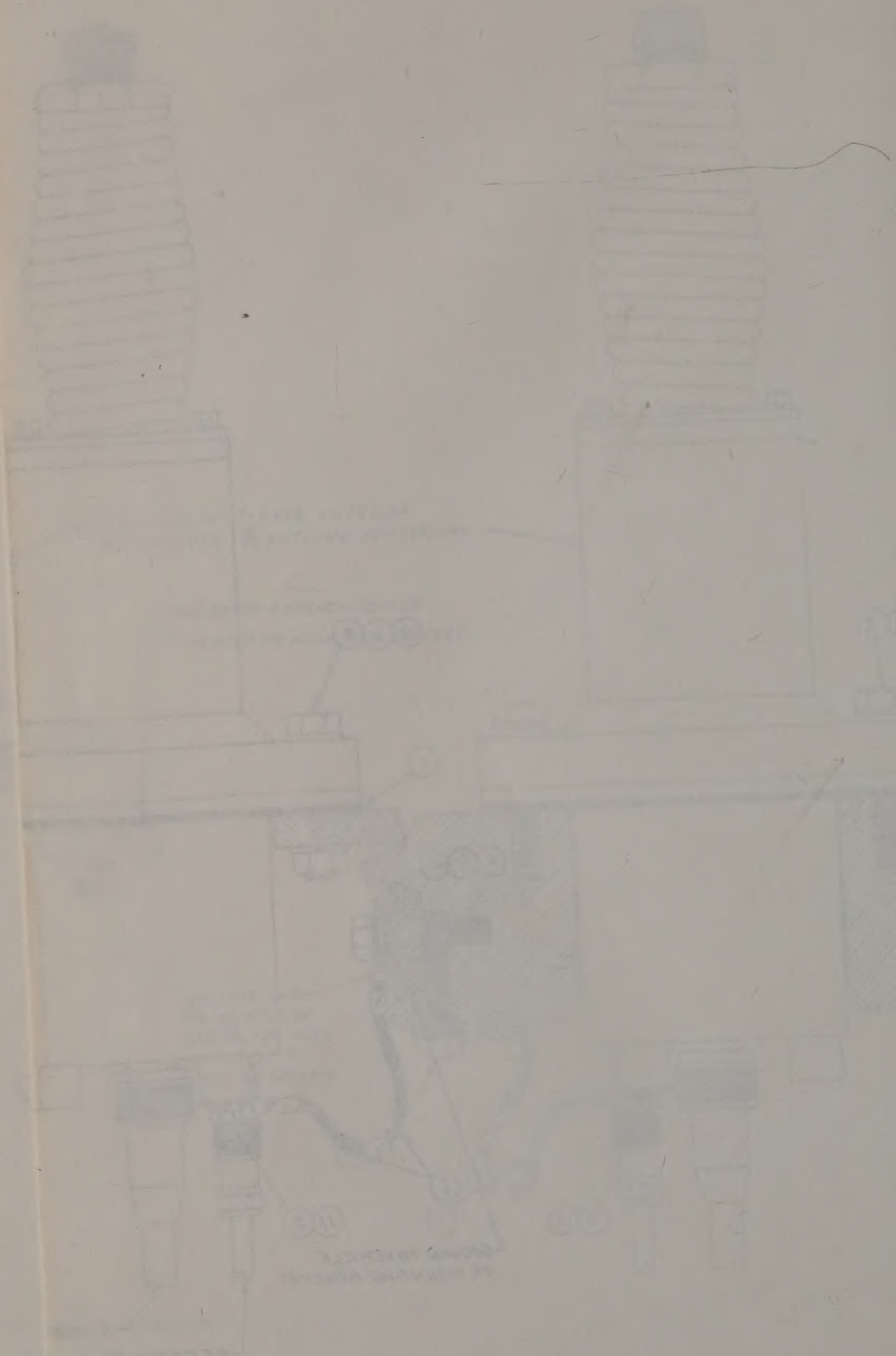


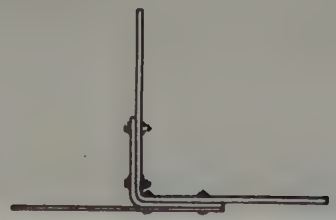
DETAIL A

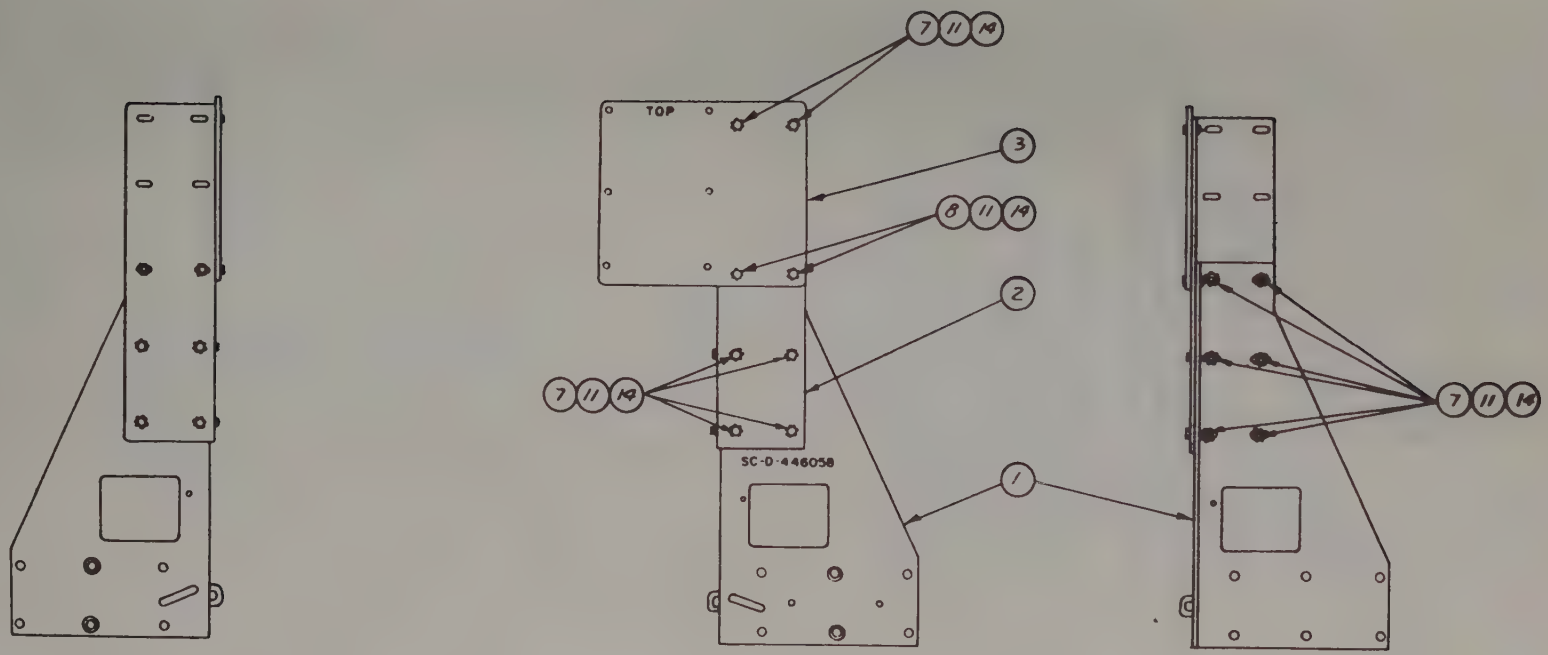
NOTE:
1 — IN THE EVENT THE ANTENNA AS-1729/VRC IS ISSUED WITH THE BASIC UNIT OF AN/VRC-12 (SERIES) RADIO SETS INSTALL AS SHOWN IN APPROPRIATE VIEW.
2 — RETURN EXCESS BRACKETS AND PARTS PER AR 755-6
3 — FOR VEHICLES EQUIPPED WITH SMALL ANTENNA OPENING SEE DETAIL A.

Item No.	Name of items	Qty reqd	Remarks
1	Gasket, rubber	1	SC-B-160382
2	Ground strap (6 in. lg)	1	SC-C-27813GP9
3	Hex. hd. cap scr 3/8 - 16 × 1¾ lg	4	MS35291-65
4	Hex. hd. cap scr 5/16 - 24 × 1½ lg	1	MS35292-38
5	Hex. hd. cap scr #10 - 32 × ½ lg	1	MS9122-03
6	Hex. nut, plain 3/8 - 16	4	MS35690-602
7	Hex. nut, plain 5/16 - 24	1	MS35690-522
8	Washer, split 3/8 13/32 id	4	MS353338-27
9	Washer, flat 13/32 id - 13/16 od	4	MS15795-214
10	Lockwasher 5/16 iet	3	MS45904-72
11	Lockwasher #10 iet	2	MS45904-60

Figure 2-2. Drilling details for Antenna AS-1729/VRC.





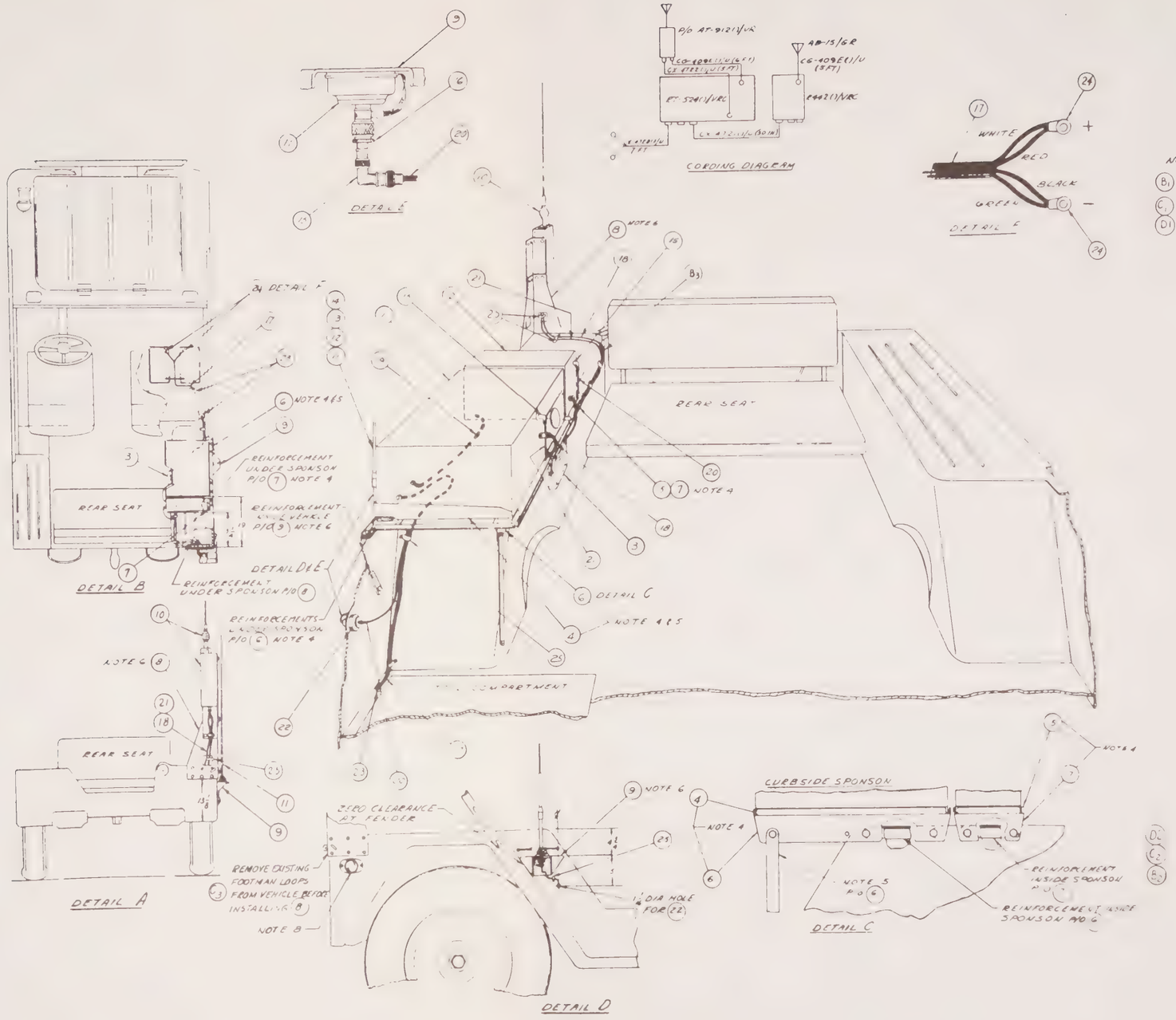


NOTES:
1- (4) SHALL NOT BE ASSEMBLED, BUT SHALL BE SECURELY TAPED TO (1)
2- PLACE (5)(6)(9)(10)(12)(13)(15) AND (16) IN (17) AND ATTACH TO (1).

Figure 2-3. Antenna mount assembly.

Item No.	Name of item	Qty reqd	Remarks
1	Mount assembly (Notes 1 and 2)	1	SC-D-446059
2	Brace	1	SC-C-48636
3	Support	1	SC-C-48637
4	Reinforcement (Note 1)	2	SC-C-446060
5	Hex. hd. cap screw, 5/16 - 24 × 1¼ lg (Note 2).	8	MS90726-36
6	Flt hd. mach screw, 5/16 - 24 × 1¼ lg (Note 2).	4	MS35242-109
7	Hex. hd. cap screw, ¼ - 28 × ¾ lg	12	MS90726-6
8	Hex. hd. cap screw, ¼ - 28 × 1 lg	2	MS90726-8
9	Pan hd mach screw, No. 10 - 32 × 1 lg (Note 2)	2	MS35224-67
10	Nut, hex., plain 5/16 - 24 (Note 2)	12	MS35690-522
11	Nut, hex., plain ¼ - 28	14	MS35690-422
12	Nut, hex., plain No. 10 - 32 (Note 2)	2	MS35650-102
13	Washer, lock 5/16 iet (Note 2)	24	MS45904-72
14	Washer, lock ¼ iet	28	MS45904-68
15	Washer, lock No. 10 iet (Note 2)	2	MS45904-60
16	Washer, flat No. 10 (Note 2)	2	MS27183-8
17	Bag 3 × 5 Specification PPP-B-20 (Note 2)	1	SC-B-49729-2

Figure 2-3. Antenna mount assembly.



NOTES

1—UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

2—AS SUPPLIED BY ATLANTIC INDIA RUBBER WORKS CHICAGO, ILL., OR EQUAL

3—AS SUPPLIED BY H B SHERMAN MFG CO BATTLE CREEK, MICH., OR EQUAL

4—INSTALL MOUNTING MT-1029()/VRC (4) ON SUPPORT BRACKET (6) AND MOUNTING MT-1898()/VRC (5) ON BRACKET (7) LOCATE ASSEMBLIES ON CURBSIDE SPONSON AS SHOWN IN DETAIL B USING SUPPORT BRACKET (6) AND BRACKET (7) AS TEMPLATES DRILL REQUIRED HOLES IN VEHICLE

5—MOUNT BRACE ON SUPPORT BRACKET (6) LOCATE HOLE REQUIRED ON VERTICAL SPONSON FOR SECURING BOTTOM OF BRACE, DETAIL "C"

6—LOCATE HOLES REQUIRED IN VEHICLE FOR ANTENNA MOUNT (8) AND ANTENNA MOUNT (9) BY USING (8) & (9) AS DRILLING TEMPLATES SEE DETAILS A AND D

7—CUT CLAMP STRAP KIT MATERIAL INTO REQUIRED LENGTHS FOR CABLE CLAMPING LOCATE CLAMPS APPROXIMATELY AS SHOWN

8—RELOCATE REFLECTOR 2½ INCHES DOWN FROM ORIGINAL POSITION, FOR MOUNTING USE HARDWARE SUPPLIED IN CLAMP STRAP KIT (25) USE REFLECTOR AS TEMPLATE FOR DRILLING HOLES IN VEHICLE, DETAIL D

9—IF ANTENNA AS-1729/VRC IS SUPPLIED IN INSTALLATION UNIT

Item No	Name of items	Qty req'd	Remarks
1	Radio Receiver-Transmitter RT-524/VRC	1	
2	Radio Receiver R-442/VRC	1	
3	Speaker LS-454/U	1	
4	Mounting MT-1029/VRC	1	Note 4
5	Mounting MT-1898 VRC	1	Note 4
6	Support bracket (Notes 4 and 5)	1	SC-DL-48676
7	Bracket (Note 4)	1	SC-DL
8	Antenna mount assy (Note 6)	1	SC-D-446058
9	Antenna mount (Note 6)	1	SC-DL-48528
10	Antenna AT-912/VRC or AS-1729/VRC	1	Note 9
11	Mast Base AB-15/GR	1	
12	Mast Section MS-116A	1	
13	Mast Section MS-117A	1	
14	Mast Section MS-118A	1	
15	Adapter UG-306/U	3	
16	Adapter UG-273/U	1	
17	Cable Assembly, Power, Electrical CX-4720/U (7 ft)	1	
18	Cable assembly, special purpose electrical CX-4721/U (50 ft)	1	
19	Cable assembly, special purpose electrical CX-4721/U (30 in)	1	
20	Rf cable assembly CG-409E/U (5 ft)	1	
21	Rf cable assembly CG-409E/U (6 ft)	1	
22	Insulator IL-2/U	1	
23	Grommet, rubber #2795 (Note 2)	2	
24	Terminal lug #316 (Note 3)	2	
25	Clamp, strap kit PPL list #914 (Note 7)	1	

Figure 2-4. Installation of Radio Set AN/VRC-47 in Truck, Utility, ¼-Ton, 4 × 4, M151 or M151A1.

APPENDIX A

REFERENCES

AR 700–58	Report of Packaging and Handling Deficiencies.
DA Pam 310–4	Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, Lubrication Orders, and Modification Work Orders.
SB 11–131	Vehicular Radio Sets and Authorized Installations.
SB 38–100	Preservation, Packaging, and Packing Materials, Supplies, and Equipment Used by the Army.
TB SIG 364	Field Instructions for Painting and Preserving Electronics Command Equipment.
TM 11–5820–401–10	Operator's Manual: Radio Sets AN/VRC–12 and AN/VRC–43, –44, –45, –46, –47, –48, and –49.
TM 11–5820–401–20	Organizational Maintenance Manual Including Repairs Parts and Special Tool Lists: Radio Sets AN/VRC–12 and AN/VRC–43, –44, –45, –46, –47, –48, and –49.
TM 11–5820–401–35	DS, GS, and Depot Maintenance Manual Including Repairs Parts and Special Tool Lists: Radio Sets AN/VRC–12 and AN/VRC–43, –44, –45, –46, –47, –48, and –49.
TM 38–750	Army Equipment Record Procedures.

By Order of the Secretary of the Army:

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